over the tedious and expensive grinding methods heretofore known are apparent.

Obviously, by shifting the lens portion **69** to an off-center position, lenses of the type shown in FIGURES 2 and 3 may be fabricated. It is further obvious that more than two concentric focal-length lenses may be constructed in accordance with this invention to provide between the near and distant vision portion of the lenses a concentric correction for intermediate vision.

FIGURES 14 through 17 illustrate the formation of a contact lens without the use of pressure.

It has been found that the resin materials utilized to form the lens of this invention will polymerize together without the application of pressure. As shown in FIGURE 14, a blank **71** of solid resin material of the type hereinabove defined may have formed therein a concave depression **72**. This concave depression forms the optical surface which is the juncture between the two resins of different index of refraction.

As the blank **71** has a suitable surface **72** formed therein, it is positioned with the depression facing upwardly and the depression is filled with resin material of the type hereinabove defined and referred to as a formable mass. In order that air bubbles will be excluded and that the formable mass join with the solid mass **71** in polymerization of the formable mass, it is preferred that the formable mass have a viscosity such that it will readily pour and completely fill the depression **72** without the necessity of adding pressure. Preferably, the formable mass has a physical state resembling cane syrup at about 70° F.

The blank **71** having its concavity **72** filled with the formable mass **73** is then cured until the formable mass **73** is polymerized. While polymerization will usually occur without the application of extraneous heat, it is preferred to use heat to hasten the curing process.

As shown in FIGURE 16, the cured mass is then used as a blank from which the lens is cut along the dotted lines **74** and **75**. From FIGURE 17 it will be noted that this lens, indicated generally at **76**, preferably has a portion **77** which is formed from the material of blank **71** and a portion **78** which is cut from the material **73**. As the materials of **77** and **78** have different indexes of refraction a bifocal lens will result.

It has been found that lenses manufactured in the manner just explained result in a satisfactory bond between the blank of material **71** and the formable mass **73** and the uniting of the two materials is sufficient to insure their remaining together under all conditions of use.

Primary optical power lens, as used herein, is meant to be that type of correction in a lens to correct for distance vision. Secondary optical power lens, as used herein, is meant to be that type of correction in a lens to correct for near vision.

From the foregoing it will be seen that a novel method of making lenses has been provided that achieves all the stated objects of the present invention. While illustrative embodiments of the present invention have been fully described, it will be understood that various changes may be made by those skilled in the art without departing from the spirit of the invention.

What is claimed is:

1. The method of producing a multifocal lens comprising the steps of,

providing a curved optical surface on a cured block of polymerized artificial resinous material having a selected index of refraction,

molding a polymerizable mass of artificial resinous material which when cured has a selected different index of refraction from said cured block by polymerization onto the curved optical surface of said cured block to form an integral bond between the resinous materials of the formable mass and the cured block at the curved optical surface,

curing the formable mass of resinous material to form a monolithic mass,

forming from a portion of said monolithic mass a lens having anterior and posterior optical surfaces of the desired lens optical characteristics having the same general curvature as said cured optical surface with the curved optical surface intersecting at least one of the anterior and posterior surfaces,

the portion of the lens containing said three surfaces providing a different focal length than the remainder of the lens.

2. The method of producing a multi-focal lens comprising the steps of,

providing a curved optical surface on a cured block of polymerized methyl methacrylate having a selected index of refraction,

molding a polymerizable mass comprised of the monomers, polymers and mixtures thereof of methyl methacrylate by polymerization onto the curved optical surface of said cured block to form an integral bond between the materials of the formable mass and the cured block at the curved optical surface, said formable mass of polymerizable material when cured having a selected different index of refraction from said cured block,

curing the formable mass of material to form a monolithic mass,

forming from a portion of said monolithic mass a lens having anterior and posterior optical surfaces of the desired lens optical characteristics having the same general curvature as said curved optical surface with the curved optical surface intersecting at least one of the anterior and posterior surfaces,

the portion of the lens containing said three surfaces providing a different focal length than the remainder of the lens.

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